

ABSTRACT

Multi-processor computer systems with multiple levels of cache memories are slowed down in trying to process software locks for common functions. This invention obviates the problem for the vast majority of transactions by providing an alternate procedure for handling so-called communal locks differently from ordinary software locks. The alternative procedure is not used for ordinary (non communal software lock) data and instruction transfers. The function of the CSWL (Communal SoftWare Lock) is actually accomplished at a specific cache to which an individual CSWL is mapped to, rather than sending the lock to the requesting process, which also enhances efficiency.